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Hao Bi

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EXAMINER

DESIR, PIERRE LOUIS

ART UNIT

PAPER NUMBER

2617

DATE MAILED: 08/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/749,021

**Applicant(s)**

BI ET AL.

**Examiner**

Pierre-Louis Desir

**Art Unit**

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 10,13-23 and 25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10,13-23 and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments filed on 06/06/2006 have been fully considered but they are not persuasive.

Applicants argue, as related to claim 13, that the Examiner's reliance on Trossen and Hsu is misplaced. Trossen discloses transmitting content on first and second channels. Trossen does not disclose transmitting any reliability information. At paragraph 61, add applicants, Hsu discusses providing access to a high speed broadcast service to subscribers by encrypting the HSBS content so that only subscribers may decrypt it using over-the-air encryption key. It is not even clear, continue applicants, that Hsu sends reliability information on the same channel as the content.

Examiner respectfully disagrees with Applicants. As stated in the previous Office action, Trossen does not specifically disclose a method comprising transmitting reliability information with the content information, and transmitting additional reliability information for the content on a second channel, wherein the reliability and additional reliability information for decoding the content. However, Trossen discloses a method wherein each subchannel transports a component of a multicast presentation (i.e., content information is transported on two separate and different channels) (see fig. 1, and paragraph 27). Hsu, on the other hand, discloses a method wherein controlled access can be achieved by encrypting the transmission/content so that only the subscribed users can decrypt the content. For example, (see paragraph 61) at time t1 the MS and CS negotiate the subscription security for the broadcast service. Negotiation involves exchange and maintenance of encryption keys used for receiving the broadcast content on the

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broadcast channel. The user establishes a security association with the CS on reception of the encryption information. The encryption information may include a Broadcast Access Key (BAK) or a key combination from the CS. The MS is then able to process the IP/ESP header of the received packets, however, the MS requires further information to process the ESP payload as the payload is encrypted with a Short-term Key (SK) at the CS. **The SK acts in coordination with the BAK, wherein the SK is decrypted at the receiver using the BAK.** The CS provides **further encryption information**, such as updated key information or a current SK at time t4. Note that the CS provides this information **periodically to the MS to ensure the ongoing security of the broadcast.** At time t5 the MS receives the broadcast content from the CS. **A single broadcast channel can carry one or more HSBS channels** (thus, content and encryption information may be provided in a single broadcast that can carry one or more HSBS channels); in this case, **the HSBS channels will be multiplexed in a Time-Division Multiplex (TDM) fashion within the single broadcast channel.** According to the exemplary embodiment, **the CS provides the encryption information over a dedicated channel during a packet data session, such as via PPP, WAP, or other out-of-band methods.** One embodiment also supports group calls in several different ways. For example, by using existing unicast channels, i.e., one forward link channel per MS with no sharing, of F-FCH (or the F-DCCH) on both forward and reverse links. In another example, the F-SCH (shared by group members in the same sector) (**thus, the encryption information may also be provided on a shared channel**) brand the F-DCCH (no frames but the Forward Power Control Subchannel most of the time) on the forward link and the R-DCCH on the reverse link are applied (see paragraphs 50, 54, 61, 67-68).

Regarding claim 14, Applicants argue that Hsu does not disclose transmitting the content and reliability information on first and second channel, or transmitting the content and additional reliability information with sufficient temporal proximity to enable decoding content.

Examiner respectfully disagrees with Applicants. As disclosed above, Trossen discloses a method wherein audio component and video components are transmitted on different subchannels and received by wireless terminals, wherein the terminals can synchronize the layers that constitute the performance) (see fig. 1, paragraphs 24 and 27). Also, as disclosed above, Hsu discloses that the MS is then able to process the IP/ESP header of the received packets, however, the MS requires further information to process the ESP payload as the payload is encrypted with a Short-term Key (SK) at the CS. **The SK acts in coordination with the BAK, wherein the SK is decrypted at the receiver using the BAK.** The CS provides **further encryption information**, such as updated key information or a current SK at time t4. Note that the CS provides this information **periodically to the MS to ensure the ongoing security of the broadcast.** At time t5 the MS receives the broadcast content from the CS. **A single broadcast channel can carry one or more HSBS channels** (thus, content and encryption information may be provided in a single broadcast that can carry one or more HSBS channels); in this case, **the HSBS channels will be multiplexed in a Time-Division Multiplex (TDM) fashion within the single broadcast channel.** Thus, content information, reliability information, and additional reliability information, although obviously at different times, must be received at sufficiently close enough time to allow decryption of the content (see paragraphs 50, 54, 61, 67-68).

Regarding claim 17, Applicants argue that there is no indication that the encryption key exchange disclosed by Hsu is performed on a shared channel.

Examiner respectfully disagrees with Applicants. Hsu discloses a method wherein one embodiment also supports group calls in several different ways. For example, by using existing unicast channels, i.e., one forward link channel per MS with no sharing, of F-FCH (or the F-DCCH) on both forward and reverse links. In another example, the F-SCH (shared by group members in the same sector) **(thus, the encryption information may also be provided on a shared channel)** brand the F-DCCH (no frames but the Forward Power Control Subchannel most of the time) on the forward link and the R-DCCH on the reverse link are applied (see paragraphs 50, 54, 61, 67-68).

Regarding claim 18, applicants argue that neither Trossen nor Hsu disclose transmitting reliability information using different channels using corresponding parameters.

Examiner respectfully disagrees with Applicants. Hsu discloses a method wherein **a single broadcast channel can carry one or more HSBS channels**. Thus, content and encryption information may be provided in a single broadcast on one or more HSBS channels (i.e., different channels using corresponding parameters (single broadcast)) (see paragraphs 50, 54, 61, 67-68).

Regarding claim 19, Applicants argue that Hsu fails to disclose or suggest substantially simultaneous transmitting reliability information on first and second channels.

Examiner respectfully disagrees with applicants while asserting that substantially simultaneously transmission is not the same as simultaneous transmission. Hsu discloses that the MS is then able to process the IP/ESP header of the received packets, however, the MS requires further information to process the ESP payload as the payload is encrypted with a Short-term Key (SK) at the CS. **The SK acts in coordination with the BAK, wherein the SK is**

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decrypted at the receiver using the BAK. The CS provides further encryption information, such as updated key information or a current SK at time t4. Note that the CS provides this information periodically to the MS to ensure the ongoing security of the broadcast. At time t5 the MS receives the broadcast content from the CS (see paragraphs 50, 54, 61, 67-68).

Regarding claim 20, Applicants argue that Hsu does not disclose decrypting first layer content information with a first key and decrypting second layer content information with a second key. Applicants additionally add that Hsu does not disclose first and second content layers with different keys.

Examiner respectfully disagrees with applicants. Claim 20 has been amended with the subject matter of now cancelled claim 24. In the previous office action, examiner discloses that Trossen discloses a method comprising receiving first layer content information on a first channel (see paragraph 27); receiving second layer content information on a second channel (see paragraph 27), at least one of the first and second channels identified in the message (see paragraph 45). Hsu discloses that a single broadcast channel can carry one or more HSBS channels (thus, content and encryption information may be provided in a single broadcast that can carry one or more HSBS channels); in this case, the HSBS channels will be multiplexed in a Time-Division Multiplex (TDM) fashion within the single broadcast channel. Also, Hsu discloses that the CS provides further encryption information, such as updated key information or a current SK at time t4. Combining both references, would cause one skilled in the art to arrive at the amended claim limitation.

*Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 10, 13-14, 17-23, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trossen et al. (Trossen), Pub. No. US 20030157899, in view of Hsu, Pub. No. US 20020141391.

Regarding claim 13, Trossen discloses a method in wireless communication network comprising transmitting content information on a first channel (see paragraph 27), and transmitting content information on a second channel (see paragraph 27).

Although Trossen discloses a method as described, Trossen does not specifically disclose a method comprising transmitting reliability information with the content information, and transmitting additional reliability information for the content on a second channel, wherein the reliability and additional reliability information for decoding the content.

However, Hsu discloses a method wherein controlled access can be achieved by encrypting the transmission/content so that only the subscribed users can decrypt the content. For example, at time t1 the MS and CS negotiate the subscription security for the broadcast service. Negotiation involves exchange and maintenance of encryption keys used for receiving the broadcast content on the broadcast channel. The user establishes a security association with the CS on reception of the encryption information. The encryption information may include a Broadcast Access Key (BAK) or a key combination from the CS. The MS is then able to process



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the IP/ESP header of the received packets, however, the MS requires further information to process the ESP payload as the payload is encrypted with a Short-term Key (SK) at the CS. **The SK acts in coordination with the BAK, wherein the SK is decrypted at the receiver using the BAK.** The CS provides **further encryption information**, such as updated key information or a current SK at time t4. Note that the CS provides this information **periodically to the MS to ensure the ongoing security of the broadcast.** At time t5 the MS receives the broadcast content from the CS. **A single broadcast channel can carry one or more HSBS channels** (thus, content and encryption information may be provided in a single broadcast that can carry one or more HSBS channels); in this case, **the HSBS channels will be multiplexed in a Time-Division Multiplex (TDM) fashion within the single broadcast channel.** According to the exemplary embodiment, **the CS provides the encryption information over a dedicated channel during a packet data session, such as via PPP, WAP, or other out-of-band methods.** One embodiment also supports group calls in several different ways. For example, by using existing unicast channels, i.e., one forward link channel per MS with no sharing, of F-FCH (or the F-DCCH) on both forward and reverse links. In another example, the F-SCH (shared by group members in the same sector) **(thus, the encryption information may also be provided on a shared channel)** brand the F-DCCH (no frames but the Forward Power Control Subchannel most of the time) on the forward link and the R-DCCH on the reverse link are applied (see paragraphs 50, 54, 61, 67-68).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described to arrive at the claimed invention. Furthermore, Trossen discloses that some wireless terminals may receive the video contents and other wireless

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terminal may receive just the video content, different combination of the content, or all the content. Thus, one skilled in the art would obviously and unhesitatingly conceptualize that by combining the teachings of Trossen with the teachings as disclosed by Hsu, one may arrive at a method wherein the audio content, the first and second part of the video contents, which are transmitted on different subchannels, may be transmitted with reliability information (i.e., encryption) to be decrypted by the terminal. A motivation for doing so would have been to ensure the authentication of the information being transmitted and received.

Regarding claim 10, Trossen discloses a method as described above (see claim 13 rejection).

Although Trossen discloses a method as described, Trossen does not specifically disclose a method comprising encrypting content before transmitting.

However, Hsu discloses a method wherein controlled access can be achieved by encrypting the transmission/content so that only the subscribed users can decrypt the content. This may use over-the-air encryption key exchange procedures (see paragraph 61).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described by Trossen with the characteristic as described by Hsu to arrive at the claimed invention. A motivation for doing so would have been to ensure the authentication of the information being transmitted and received.

Regarding claim 14, Trossen discloses a method as described above (see claim 13 rejection).

Although Trossen discloses a method comprising transmitting the first layer broadcast/multicast service content information and transmitting the second layer

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broadcast/multicast service content information substantially simultaneously (i.e., a performance, which includes audio component and video components are transmitted on different subchannels and received by wireless terminals, wherein the terminals can synchronize the layers that constitute the performance) (see fig. 1, paragraphs 24 and 27), Trossen does not specifically disclose a method comprising transmitting the content, the reliability information and the additional reliability information with sufficient temporally proximity to enable decoding and additional reliability information.

However, Hsu discloses a method wherein a MS is able to process IP/ESP header of received packets, however, the MS requires further information to process the ESP payload as the payload is encrypted with a Short-term Key (SK) at the CS. **The SK acts in coordination with the BAK, wherein the SK is decrypted at the receiver using the BAK.** The CS provides **further encryption information**, such as updated key information or a current SK at time t4. Note that the CS provides this information **periodically to the MS to ensure the ongoing security of the broadcast.** At time t5 the MS receives the broadcast content from the CS. **A single broadcast channel can carry one or more HSBS channels** (thus, content and encryption information may be provided in a single broadcast that can carry one or more HSBS channels); in this case, **the HSBS channels will be multiplexed in a Time-Division Multiplex (TDM) fashion within the single broadcast channel.** Thus, content information, reliability information, and additional reliability information, although obviously at different times, must be received at sufficiently close enough time to allow decryption of the content (see paragraphs 50, 54, 61, 67-68).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described to arrive at the claimed invention. Furthermore, Trossen discloses that some wireless terminals may receive the video contents and other wireless terminal may receive just the video content, different combination of the content, or all the content. Thus, one skilled in the art would obviously and unhesitatingly conceptualize that by combining the teachings of Trossen with the teachings as disclosed by Hsu, one may arrive at a method wherein the audio content, the first and second part of the video contents are transmitted on different subchannels, wherein the encryption key to decrypt the content information is transmitted using over-the-air encryption key procedures. A motivation for doing so would have been to ensure the authentication of the information being transmitted and received.

Regarding claim 17, Trossen discloses a method comprising transmitting content information on a shared channel (see paragraphs 24 and 27), and transmitting content information on a second shared channel (see paragraphs 24 and 27).

Although Trossen discloses a method as described, Trossen does not specifically disclose a method comprising transmitting reliability information with the content information, and transmitting additional reliability information for the content.

However, Hsu discloses a method wherein one embodiment also supports group calls in several different ways. For example, by using existing unicast channels, i.e., one forward link channel per MS with no sharing, of F-FCH (or the F-DCCH) on both forward and reverse links. In another example, the F-SCH (shared by group members in the same sector) **(thus, the encryption information may also be provided on a shared channel)** and the F-DCCH (no

frames but the Forward Power Control Subchannel most of the time) on the forward link and the R-DCCCH on the reverse link are applied (see paragraphs 50, 54, 61, 67-68).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described to arrive at the claimed invention. Furthermore, Trossen discloses that some wireless terminals may receive the video contents and other wireless terminal may receive just the video content, different combination of the content, or all the content. Thus, one skilled in the art would obviously and unhesitatingly conceptualize that by combining the teachings of Trossen with the teachings as disclosed by Hsu, one may arrive at a method wherein the audio content, the first and second part of the video contents, which are transmitted on different subchannels, may be transmitted with reliability information (i.e., encryption) to be decrypted by the terminal. A motivation for doing so would have been to ensure the authentication of the information being transmitted and received.

Regarding claim 18, Trossen discloses a method (see claim 13 rejection) comprising transmitting the content information using a first transmission parameter (first subchannel) (see paragraph 27) and transmitting additional content information using a second transmission parameter different than the first transmission parameter (second subchannel) (see paragraph 27). Although Trossen discloses a method as described, Trossen does not specifically disclose a method comprising transmitting reliability information with the content information, and transmitting additional reliability information for the content.

However, Hsu discloses Hsu discloses a method wherein **a single broadcast channel can carry one or more HSBS channels**. Thus, content and encryption information may be

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provided in a single broadcast on one or more HSBS channels (i.e., different channels using corresponding parameters (single broadcast)) (see paragraphs 50, 54, 61, 67-68).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described to arrive at the claimed invention. Furthermore, Trossen discloses that some wireless terminals may receive the video contents and other wireless terminal may receive just the video content, different combination of the content, or all the content. Thus, one skilled in the art would obviously and unhesitatingly conceptualize that by combining the teachings of Trossen with the teachings as disclosed by Hsu, one may arrive at a method wherein the audio content, the first and second part of the video contents, which are transmitted on different subchannels, may be transmitted with reliability information (i.e., encryption) to be decrypted by the terminal. A motivation for doing so would have been to ensure the authentication of the information being transmitted and received.

Regarding claim 19, Trossen discloses a method comprising transmitting content information on a first channel substantially simultaneously with transmitting another content information on a second channel (see paragraph 27).

Although Trossen discloses a method as described, Trossen does not specifically disclose a method comprising transmitting content and reliability information on a first channel substantially simultaneously with transmitting the additional reliability information for the content on the second channel.

Hsu discloses that the MS is then able to process the IP/ESP header of the received packets, however, the MS requires further information to process the ESP payload as the payload is encrypted with a Short-term Key (SK) at the CS. **The SK acts in coordination with the**

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**BAK, wherein the SK is decrypted at the receiver using the BAK.** The CS provides **further encryption information**, such as updated key information or a current SK at time t4. Note that the CS provides this information **periodically to the MS to ensure the ongoing security of the broadcast**. At time t5 the MS receives the broadcast content from the CS (see paragraphs 50, 54, 61, 67-68).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described to arrive at the claimed invention. Furthermore, Trossen discloses that some wireless terminals may receive the video contents and other wireless terminal may receive just the video content, or different combination of the content. Thus, one skilled in the art would obviously and unhesitatingly conceptualize that by combining the teachings of Trossen with the teachings as disclosed by Hsu, one may arrive at a method wherein the audio content, the first and second part of the video contents may be encrypted. A motivation for doing so would have been to ensure the authentication of the information being transmitted and received

Regarding claim 20, Trossen discloses a method in wireless communications device, the method comprising: receiving a message identifying a channel on which content will be transmitted (i.e., link-level multicast addresses are assigned corresponding to appropriate groups of layers, and consequently node 207 signals the wireless terminals about the assigned link-level multicast addresses) (see page 4, and paragraph 45); receiving first layer content information on a first channel (see paragraph 27); receiving second layer content information on a second channel (see paragraph 27), at least one of the first and second channels identified in the message (see paragraph 45).

Although Trossen discloses a method as described above, Trossen does not specifically disclose a method wherein the first and second layer content information is encrypted, and decrypting the second layer content information with a second key that is different than the first key.

However, Hsu discloses that **a single broadcast channel can carry one or more HSBS channels** (thus, content and encryption information may be provided in a single broadcast that can carry one or more HSBS channels); in this case, **the HSBS channels will be multiplexed in a Time-Division Multiplex (TDM) fashion within the single broadcast channel**. Also, Hsu discloses that the CS provides **further encryption information**, such as updated key information or a current SK at time t4.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described to arrive at the claimed invention. Furthermore, Trossen discloses that some wireless terminals may receive the video contents and other wireless terminal may receive just the video content, or different combination of the content. Thus, one skilled in the art would obviously and unhesitatingly conceptualize that by combining the teachings of Trossen with the teachings as disclosed by Hsu, one may arrive at a method wherein the audio content, the first and second part of the video contents may be encrypted. A motivation for doing so would have been to ensure the authentication of the information being transmitted and received.

Regarding claim 21, Trossen discloses a method (see claim 20 rejection) comprising combining the first and second layer content at the wireless subscriber device (see paragraphs 24 and 27).



Regarding claim 22, Trossen discloses a method (see claim 20 rejection) wherein the wireless communication device is a broadcast/multicast subscriber device (i.e., wireless terminal) (see fig. 1, paragraphs 24 and 27), and receiving first layer content information includes receiving first layer broadcast/multicast content information (see paragraph 27); receiving second layer content information includes receiving second layer broadcast/multicast content information (see paragraph 27).

Regarding claim 23, Trossen discloses a method (see claim 20 rejection) wherein receiving first layer content information on a first channel includes receiving the first layer content information on a first broadcast channel (i.e., see paragraph 27).

Regarding claim 25, Trossen discloses a method as described above (see claim 20 rejection).

Although Trossen discloses a method as described, Trossen does not specifically disclose a method wherein at least one of the first and second layer content information is encrypted, receiving at least one decryption key for the at least one decrypted first and second layer content information.

Hsu, on the other hand, discloses a method wherein controlled access can be achieved by encrypting the transmission/content so that only the subscribed users can decrypt the content. For example, (see paragraph 61) at time t1 the MS and CS negotiate the subscription security for the broadcast service. Negotiation involves exchange and maintenance of encryption keys used for receiving the broadcast content on the broadcast channel. The user establishes a security association with the CS on reception of the encryption information. The encryption information may include a Broadcast Access Key (BAK) or a key combination from the CS. The MS is then

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able to process the IP/ESP header of the received packets, however, the MS requires further information to process the ESP payload as the payload is encrypted with a Short-term Key (SK) at the CS. The SK acts in coordination with the BAK, wherein the SK is decrypted at the receiver using the BAK. The CS provides further encryption information, such as updated key information or a current SK at time t4. Note that the CS provides this information periodically to the MS to ensure the ongoing security of the broadcast. At time t5 the MS receives the broadcast content from the CS. A single broadcast channel can carry one or more HSBS channels (thus, content and encryption information may be provided in a single broadcast that can carry one or more HSBS channels); in this case, the HSBS channels will be multiplexed in a Time-Division Multiplex (TDM) fashion within the single broadcast channel. According to the exemplary embodiment, the CS provides the encryption information over a dedicated channel during a packet data session, such as via PPP, WAP, or other out-of-band methods. One embodiment also supports group calls in several different ways. For example, by using existing unicast channels, i.e., one forward link channel per MS with no sharing, of F-FCH (or the F-DCCH) on both forward and reverse links. In another example, the F-SCH (shared by group members in the same sector) (thus, the encryption information may also be provided on a shared channel) brand the F-DCCH (no frames but the Forward Power Control Subchannel most of the time) on the forward link and the R-DCCH on the reverse link are applied (see paragraphs 50, 54, 61, 67-68).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described to arrive at the claimed invention. Furthermore, Trossen discloses that some wireless terminals may receive the video contents and other wireless

terminal may receive just the video content, different combination of the content, or all the content. Thus, one skilled in the art would obviously and unhesitatingly conceptualize that by combining the teachings of Trossen with the teachings as disclosed by Hsu, one may arrive at a method wherein the audio content, the first and second part of the video contents may be encrypted. A motivation for doing so would have been to ensure the authentication of the information being transmitted and received.

4. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trossen and Hsu in further view of Ranta-Aho et al. (Ranta-Aho), Pub. No. US 20040081125.

Trossen and Hsu disclose a method as described above (see claim 13 and 14 rejections). The combination discloses a method comprising transmitting content and information on a shared broadcast channel wherein content information and reliability information are transmitted at substantially the same time (refer to claims 13 and 14 rejections). The combination further discloses transmitting additional broadcast/multicast service content information (see Trossen paragraph 27).

Although the combination discloses a method as described above, the combination does not specifically disclose a method comprising transmitting information on a dedicated channel.

However, Ranta-Aho discloses a method wherein multicast messages are sent in the downlink shared channels (page 1, paragraph 22, also refer to paragraphs 31 and 52), and MBMS content is sent on the dedicated channel (see page 3, paragraph 58, also refer to paragraphs 31 and 52), and wherein broadcast or simulcast content information may be received simultaneously (see paragraph 70).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described above with the teachings of Ranta-Aho to arrive at the claimed invention. A motivation for doing so would have been to ensure the proper transport of the content information.

### *Conclusion*

**5. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pierre-Louis Desir whose telephone number is (571) 272-7799. The examiner can normally be reached on Monday-Friday 8:00AM- 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Pierre-Louis Desir  
08/15/2006

  
ERIKA A. GARY  
PRIMARY EXAMINER